

CLAIMS:

1. A method for a consistent user interface (CUI) on a control device providing
5 access to at least one network device having a remote user interface (RUI), comprising the
steps of:
 providing the CUI;
 mapping the RUI to the CUI; and
 displaying by the control device at least a part of the CUI instead of the RUI as a user
10 interface to the network device.
2. The method of claim 1, wherein:
the providing step further comprises the steps of:
 receiving by the control device an RUI definition comprising at least one RUI
15 component;
 providing the CUI comprising at least one CUI component optionally pre-set as
a synonym for said at least one RUI component; and
the mapping step further comprises the step of replacing the received at least one RUI
component with said pre-set synonym CUI component by the control device whenever the
20 control device displays a user interface to the network device.
3. The method of claim 2, further comprising the step of transmitting the RUI
definition by the at least one network device.
- 25 4. The method of claim 3, wherein said transmitting step further comprises the
step of on power-up, transmitting the RUI definition by the at least one network device.
5. The method of claim 3, wherein said transmitting step further comprises the
step of transmitting the RUI definition using a network based on at least one of IP (RFC 791),
30 NETBEUI, Bluetooth, Zigbee, SCP, IEC61883, DVB and ATSC DTV.

6. The method of claim 5, wherein said transmitting step further comprises the step of transmitting the RUI definition using a protocol based on at least one of RDP, X-Windows, VNC, HTTP, HAVi DDI, and UI Fragments.

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7. The method of claim 5, wherein said receiving step further comprises the step of using by the at least one network device for the RUI definition a UI description format based on at least one of HTML, XML, Macromedia, Flash and Java.

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8. The method of claim 3, further comprising the step of sending the provided CUI to at least one of the at least one network device and a second control device.

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9. The method of claim 7, further comprising the step of transmitting a RUI definition by at least a second network device to the control device using at least one of a different protocol selected from the set consisting of RDP, X-Windows, VNC, HTTP, HAVi DDI, and UI Fragments and a different UI description format selected from the group consisting of HTML, XML, Macromedia, Flash and Java than the corresponding protocol and description format used by the at least one network device.

10. The method of claim 1, wherein:
the RUI and CUI comprise at least one RUI component and at least one CUI
component, respectively; and
further comprising the steps of:
5 extracting said at least one RUI component;
determining if said at least one CUI component is a synonym for the extracted at least
one RUI component; and
wherein, said mapping step further comprises the step of
if said at least one CUI component is determined to be a synonym for the extracted at
10 least one RUI component, mapping the at least one extracted RUI component to the
determined said at least one CUI component.

11. The method of claim 10, further comprising the step of finding at least one CUI
component that satisfies a predetermined similarity measure to said at least one RUI
15 component for a plurality of network devices.

12. The method of claim 10, further comprising the step of finding at least one CUI
component that satisfies a predetermined consistency measure of the mapped at least one RUI
20 component.

13. The method of claim 10, wherein said determining step further comprises the
step of searching at least one of a thesaurus and a synonym database for a synonym of the
extracted at least one RUI component that matches said at least one CUI component.

25 14. The method claim 13, further comprising the step of storing said matching
synonym determined from the thesaurus in the synonym database for the extracted at least one
RUI component.

15. The method of claim 14 wherein said at least one thesaurus is located on a
30 second network and said at least one network device is located on a first network.

16. The method of claim 15, wherein said second network is the Internet.

17. The method of claim 15, wherein said first network is a home network and said
5 network device is a consumer electronic device.

18. The method of claim 1, wherein said at least a part of the CUI is determined
according to a set of user preferences.

10 19. The method of claim 1, wherein:
said at least one network device further comprises at least one application local to the
control device and said RUI further comprises at least one local user interface (LUI) to said at
least one local application.

15 20. The method of claim 10, wherein:
said at least one network device further comprises at least one application local to the
control device and said RUI further comprises at least one local user interface (LUI) to said at
least one local application.

20 21. A method for a slave network device to replace a remote user interface (RUI)
with a consistent user interface (CUI), comprising the steps of:
transmitting by the slave network device the RUI to a control network device; and
replacing by the control network device at least a part of the transmitted RUI with at
least a part of the consistent CUI by the method of claim 1.

25 22. A control device that provides a consistent user interface (CUI) in a network of
at least one slave device having a remote user interface (RUI), comprising:
a transceiver for receiving the RUI;
an extraction logic module configured to extract at least one component of the RUI;
30 a database that is configured to store synonyms of components of an RUI; and

an analysis and transformation module configured to

- i. map the extracted at least one component of the RUI to a component of the CUI according at least one of the synonyms stored in said database and a thesauri,
- ii. store the mapping in a memory,
- 5 iii. optionally update the synonym database with the mapping, and
- iv. provide a user interface to the at least one slave device according to at least a part of the mapping of the extracted at least one component of the RUI.

23. The control device of claim 22, further comprising:

10 at least one local user interface (LUI) to at least one local application;

wherein,

said extraction logic module is further configured to extract at least one component of the LUI;

said database is further configured to store synonyms of components of an LUI;

15 said analysis and transformation module is further configured to

v. map the extracted at least one component of the LUI to a component of the CUI according to at least one of the synonyms of components of an LUI stored in said database and a thesauri,

20 vi. provide a user interface to the at least one local application according to at least a part of the mapping of the extracted at least one component of the LUI.

24. The control device of claim 22, wherein said analysis and transformation module is further configured to:

vii. accept a set of user preferences; and

25 viii. provide said at least a part of the mapping in accordance with the set of user preferences.

25. The control device of claim 22, wherein the thesauri is accessed via another network.

26. The control device of claim 25, wherein the another network is the Internet.

27. The control device of claim 22, wherein the slave device is a consumer electronic device.

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28. The control device claim 27, wherein the network is a home network.

29. The control device of claim 22, wherein the network is a home network.

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